

REMARKS

In the Office Action, the Examiner (1) maintained the restriction requirement and withdrew claims 1-12 and 15-20 from further consideration, (2) objected to claims 13 and 14 as being of improper dependent form, and (3) rejected claims 13 and 14 under 35 U.S.C. §103(a) as being obvious over Yamagishi et al. (U.S. patent 6,408,913) or JP-05-306208. The objection and rejection are addressed separately below. In view of the amendments noted above and the remarks below, applicants respectfully request reconsideration of the merits of this patent application.

A petition for a one-month extension of time accompanies this response so that the response will be deemed to have been timely filed. If any other extension of time is required in this or any subsequent response, please consider this to be a petition for the appropriate extension and a request to charge the petition fee to the Deposit Account No. 17-0055. No other fee is believed to be due in connection with this response. However, if any fee is due in this or any subsequent response, please charge the fee to the same Deposit Account No. 17-0055.

Claim objection

The Examiner objected to claims 13 and 14 as being of improper dependent form. In response, claims 13 and 14 have been rewritten in independent form to incorporate the limitations of claim 1 as suggested by the Examiner. The objection is believed to have been overcome.

Other claim amendments

Claims 16-18 are amended for rejoinder purposes.

New claims 21-30 that correspond to canceled claims 2-5 and 7-12, respectively, are added.

Obviousness rejection under 35 U.S.C. §103(a)

The Examiner rejected claims 13 and 14 under 35 U.S.C. §103(a) as being obvious over Yamagishi et al. (U.S. patent 6,408,913) or JP-05-306208. In particular, the Examiner alleged that the above prior art references disclosed a dental coating composition and a dental adhesive within the scope of the copolymers of the present invention and it would have been obvious to

one having ordinary skill in the art to apply the dental coating composition or the dental adhesive to denture, motivated by a reasonable expectation of success. Applicants respectfully traverse the rejection.

The motivation to modify the prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. See e.g., *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996); and *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995). "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In Re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989). The Federal Circuit has repeatedly stated that the requisite motivation must come from the prior art, not applicant's specification. See e.g., *In re Dow Chem. Co. v. American Cyanamid Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988); and *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

The two references cited in the Office Action are concerned with materials that are to be used for repairing missing tooth structure and mention nothing about denture, much less any incentive to coat denture with the materials disclosed therein. While the conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference, the Examiner must provide facts and evidence on the common knowledge and common sense and conclusory statements do not fulfill the U.S. Patent and Trademark Office's obligation to explain all material facts relating to a motivation to combine (*In re Lee*, 277 F.3d 1338, 1344-1345 (Fed. Cir. 2002)). The facts in *In re Lee* are analogous here. *In re Lee* involved a patent combining a prior art video game instruction handbook describing a "demonstration mode" with a prior art television set having a menu display allowing video and audio adjustments. The Examiner in *In re Lee* stated that the combination of the two cited references "would have been obvious to one of ordinary skill in the art since the demonstration mode is just a programmable feature which can be used in many different devices for providing automatic introduction by adding the proper programming software" (and thus it is clear that the combination would be successful) and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" (*Id.* at 1341). However, the Federal Circuit explained that the above statements are conclusory and do not fulfill the USPTO's obligation to explain all material facts

relating to a motivation to combine. The above holding of *In re Lee* has just been reaffirmed by the Federal Circuit on October 3, 2006 (*DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, ___ F. 3d __ (Fed. Cir. 2006)). Similar to *In re Lee*, the conclusory statement in the present office action that "it would have been obvious to one having ordinary skill in the art to apply the dental coating composition onto PMMA denture surface, motivated by the reasonable expectation of success in the oral environment" is insufficient to establish a *prima facie* case of obviousness.

Unlike a case wherein modifying a prior art device to make it cheaper, faster, and more convenient to manufacture would provide the motivation to combine (*Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1355 (Fed. Cir. 2001)), the Examiner has not provided any evidence on the desirability of coating a denture with anything, much less the specific materials disclosed in the cited prior art references in particular. Without this, a skilled artisan would not have coated a denture as it makes the denture more expensive. Even if one were to repair a denture, which is currently made of PMMA polymers, a skilled artisan would use the same PMMA materials, which is the current practice in the art that works very well.

It is the present application that identified the advantages of the copolymers defined in claim 1 in that they can adsorb salivary antimicrobials on the surface to a degree sufficient to inhibit the adherence of microorganisms on one hand (see e.g., examples 2-4 of the application) and yet be of sufficient mechanical integrity to meet the ADA/ISO (American Dental Association/International Standard Organization) flexural strength requirement for a denture (see e.g., example 5 of the application) on the other hand. Neither reference cited in the Office Action tested or suggested that the materials disclosed therein possess the right properties such as acceptable flexural strength to make them suitable for dentures. In fact, the inventors of the present invention were not sure at all whether the copolymers defined in claim 1 would have the right properties to make them suitable for dentures and this is why they tested the flexural strength as provided in example 5 of the application. However, as discussed above, the motivation to modify the prior art cannot be from the applicant's application but must be from the prior art.

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For all the above reasons, it is respectfully submitted claims 13 and 14 as amended as well as their dependent claims are not obvious over Yamagishi et al. (U.S. patent 6,408,913) or JP-05-306208.

Respectfully submitted,



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